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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/046,374	01/14/2002	Stephen NIcholas Weiss	4110-183/165U1	1622

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EXAMINER	
ENATSKY, AARON L	
ART UNIT	**PAPER NUMBER**
3713	

DATE MAILED: 03/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

A.K.

Office Action Summary	Application No.	Applicant(s)	
	10/046,374	WEISS ET AL.	
	Examin r	Art Unit	
	Aaron L Enatsky	3713	

-- The MAILING DATE of this communication appears on the cover she t with the correspond nc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 December 2002* .

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-12* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-12* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Response to Amendment

Examiner acknowledges receipt of amendment on 12/16/02. The arguments set forth in the response are addressed herein below. Rejections based upon this prior art are contained herein below. Furthermore, the prior art rejections of record are being maintained for the reasons set forth in the response to argument section herein.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicant requires elements of a software phase-locked loop. The specification does not refer to or support a software derived phase-locked loop nor would one of ordinary skill know how to develop a *software* phase-locked loop.

Claim 12 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant requires a software phase-locked loop, which one of ordinary skill would not be readily able to build, as phase-locked loops generally comprise of hardware.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1, 3-4, 9-11 is rejected under 35 U.S.C. 102(b) as being anticipated by Rosenhagen et al. '221 (Rosen). Rosen discloses a wireless remote control system for a toy vehicle (Fig. 1) using a Manchester packet-encoding scheme (6:1-24). The Manchester encoding uses biphase encoded bits having a 50% duty cycle (6:1-24) where one binary state is defined by two transmit elements of a bit being the same and another binary state is defined by two transmit elements of a bit being opposite (Fig. 5). The packets are uniformly encoded as having a first predetermined number of flag bits, a second predetermined number data bits that will varying values depending on selected steering and speed, and at least one checksum bit (Fig. 4).

In re claim 3, a packet is made of a variable length flag bit followed by 14 bits, which teaches having a 16-bit packet (5:58-68).

In re claim 4, the flag bit can be variable, allowing for any number of flag bits, including six flag bits (5:58-68).

In re claim 9, flag bits are at the leading edge of a packet where checksum or parity bits are trailing a packet (Fig. 4).

In re claim 10, as the encoding scheme is bi-phase, the control signals are read in the middle of each transmit element (6:1-24).

In re claim 11, the decoder is a microprocessor (Fig. 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 2, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen. In re claims 2, 5-8, Rosen teaches the claimed limitations as discussed above, but does not recite the exact arrangement of the packet structure claimed by Applicant. However, the packet size and structure, such as bit arrangement for communicating certain features or commands is considered an obvious matter of choice that is well within the capabilities of one of ordinary skill in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rosen to arrange the second number of bits as eight, allocating three bits for drive function and three bits for steering functions, allocating 2 bits for other functions, and allocating the lower two bits of a sum of all the ones data bits for a parity check.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rosen in view of The Art of Electronics (AE). Rosen teaches the claimed limitations as discussed above, but does not teach using a digital phase-locked loop (PLL). AE teaches applications of a PLL circuit, such as in wireless communication devices (Pg. 652-653). AE also provides motivation for one to include a PLL in a circuit, such as for pulse synchronization of signals from noisy sources and regeneration of clean signals (Pg. 641). As wireless communication is fraught with noise issues such as in a remote wireless communication link, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a PLL in the decoder of a receiving

device taught by Rosen to insure proper signal transmission and decoding, which would further ensure a highly response remote vehicle control system by eliminating noise.

Response to Arguments

Applicant's arguments have been fully considered, but are not considered persuasive. Applicant argues two main points, one regarding the differences between the Rosen patent and Applicant's application, the other concerning the combination of Rosen with a phase-locked loop.

In regard to Applicant's arguments of the differences, Examiner contends that the application still reads on the Rosen reference. Applicant has amended the claims to require that packets are continuously transmitted at a constant frequency. Applicant contends that Rosen does not teach such because Rosen's transmission stream is repetitively transmitted in bursts followed by quiescent periods. Applicant elaborates that Rosen teaches transmission bursts of 2.5 milliseconds followed by a 97.5 millisecond quiescent period (Amendment Remarks Pg. 4). Therefore, the repetitive cycling by nature, reads on Applicant's continuous transmission at a constant frequency.

In regards to the improper combination, Applicant argues that Rosen in view AE does not teach the use of software derived phase-locked loops in the invention. It is the Examiner's belief that a phase-locked loop is a hardware device, lacking additional evidence, a software derived PLL would only exist in circuit simulations. Furthermore, Examiner has provided additional material indicating that PLL circuits have been around for many years and includes both analog and digital incarnations used for all types of wireless communications (AN177 An overview of the phase-locked loop pgs. 1 and 4).

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron L Enatsky whose telephone number is 703-305-3525. The examiner can normally be reached on 8:00 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Valencia Martin-Wallace can be reached on 703-308-4119. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9302 for regular communications and 703-872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1148.

Aaron Enatsky
March 5, 2003

VALENCIA MARTIN-WALLACE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700